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10/575,758	03/05/2007	Hiromichi Inaishi	1794-0182PUS1	5126

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

ALHIJA, SAIF A

ART UNIT	PAPER NUMBER
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2128

NOTIFICATION DATE	DELIVERY MODE
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06/16/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/575,758	Applicant(s) INAISHI ET AL.	
	Examiner SAIF A. ALHIJA	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/13/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 25-46 have been presented for examination.

Claims 1-24 have been cancelled in a preliminary amendment.

PRIORITY

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 13 April 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the Examiner has considered the IDS as to the merits.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

MPEP 2106 recites:

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result" State Street 149 F.3d at 1373, 47 USPQ2d at 1601-02. A process that consists solely of the manipulation of an abstract idea is not concrete or tangibles. See In re Warmerdam, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed.Cir. 1994). See also Schrader, 22 F.3d at 295, 30 USPQ2d at 1459.

4. **Claims 25-46 are rejected** under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- i) The Courts have found that subject matter that is not a practical application or use of an idea, a law of nature or a natural phenomenon is not patentable. As the Supreme Court has made clear, "[a]n idea of itself is not patentable," Rubber-Tip Pencil Co. v. Howard, 20 U.S. (i Wall.) 498, 507 (1874); taking several abstract ideas and manipulating them together adds nothing to the basic equation. In re Warmerdam, 31 USPQ2d 1754 (Fed. Cir. 1994).

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The language of the claims indicate that the claims are directed merely to an abstract idea that is not tied to a technologic art, environment, or machine that would conclude with a tangible result to form the basis of statutory subject matter under 35 USC 101. The claims appears to be no more than non-functional descriptive language without any application, therefore the claims are rejected under 35 USC 101.

ii) Further, claims 39-41 recite a “web system” but are dependent upon a device. This represents a mixing of statutory categories.

iii) Claim 42 recites allowing which is not afforded patentable weight since the mere capability to do something is not considered a limitation. Therefore the claim is also non-statutory since the usefulness of the claim cannot be realized. This further applies to claims 43 and 45.

Appropriate correction is required.

All claims dependent upon a rejected base claim are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 25-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

i) Claim 25 recites “based on a circuit diagram designed by a circuit design.” It is unclear what is meant by this phrase and renders the claim vague and indefinite. This further applies to claim 44.

ii) Claim 35 recites “executing macro that supports check in ...” How is the macro defined? What does it do? A macro is defined to be a set of instructions and it is unclear what they are intended to perform in the claim. It is unclear what is meant by this phrase and renders the claim vague and indefinite.

iii) Claim 38 recites “history management of pass-fail judgment and the like by separately adding an empty article for inputting in said management means when a correction of printed circuit board design is necessary.” It is unclear what is meant by this limitation. First what is meant by “and the like”. This is vague and indefinite. Second, what is meant by “adding an empty article for inputting.” Third, how is determination of

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necessity evaluated and where is the mechanism which determines it. It is unclear what is meant by this phrase and renders the claim vague and indefinite.

Appropriate correction is required.

All claims dependent upon a rejected base claim are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 25-27, 32, 36-42, and 44-46 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Geppert, "IC Design on the World Wide Web", hereafter Geppert.

Regarding Claim 25:

The reference discloses A printed circuit board design instruction support device that supports printed circuit board design between a circuit design and a printed circuit board design, said device comprising: means for displaying design instruction information regarding previously fixed printed circuit board design based on a circuit diagram designed by a circuit design. **(Geppert. Page 46, Figure 1, circuit CAD)**

Regarding Claim 26:

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The reference discloses The printed circuit board design instruction support device according to claim 25, wherein said display means displays keywords, which are associated with said design instruction information and set based on the type of items regarding a circuit design, together with said design instruction information. **(Geppert. Page 48, bottom right, “including searches by key word.”)**

Regarding Claim 27:

The reference discloses The printed circuit board design instruction support device according to claim 26, said device comprising: means for extracting items included in said circuit diagram based on said keywords. **(Geppert. Page 48, bottom right, “With the last option, the engineer clicks on a part in a generic schematic supplied by National Semiconductor, bringing up a list of part numbers.”)**

Regarding Claim 32:

The reference discloses The printed circuit board design instruction support device according to claim 27, said device comprising: means for associating items that were extracted based on said extraction means with said design instruction information via said keywords, wherein said display means displays the items associated by said association means. **(Geppert. Page 48, bottom right, “One of the most successful Web sites for design information is maintained by National Semiconductor Corp., Santa Clara, Calif. Visitors to the company's site have access to its complete portfolio of more than 27 000 parts-the equivalent of more than 40 000 pages of technical information.”)**

Regarding Claim 36:

The reference discloses The printed circuit board design instruction support device according to any one of claims 25, 26, 27, 28, 29, 30, 31, 32, 33 and 34, said device comprising: means for managing whether or not a printed circuit board design was performed according to said design instruction information. **(Geppert. Figure 1, verification)**

Regarding Claim 37:

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The reference discloses The printed circuit board design instruction support device according to claim 36, said device comprising: means for managing authorization to a printed circuit board design that was performed based on said design instruction information. **(Geppert. Page 47, top right, “User authentication and strong data encryption can be used for added security”)**

Regarding Claim 38:

The reference discloses The printed circuit board design instruction support device according to claim 36, said device comprising: means for performing history management of pass-fail judgment and the like by separately adding an empty article for inputting in said management means when a correction of printed circuit board design is necessary. **(Geppert. Page 49, middle, “If a designer wishes to work on a circuit block, she checks it out from the database, and the data is transmitted to her over the Web. When finished, she checks it back in, and the revision management software stores the data, along with the appropriate information about the revision.”)**

Regarding Claim 39:

The reference discloses A Web system, comprising: means for providing information, which is accumulated in a Web server, in response to a request from the printed circuit board design instruction support device according to claim 25. **(Geppert. Page 47, left bottom, client/server)**

Regarding Claim 40:

The reference discloses A Web system, comprising: means for performing calculation in a Web server and providing the result of the calculation in response to a request from the printed circuit board design instruction support device according to claim 25. **(Geppert. Page 48, bottom middle, “Sente Inc., Acton, Mass., has enhanced its IC power analysis product, Watt- Watcher, with software that creates a Web page on a user's Internet or intranet server to display the results of a power analysis done for a user's circuit.”)**

Regarding Claim 41:

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The reference discloses A Web system, comprising: means for accumulating information in a Web server in response to a request from the printed circuit board design instruction support device according to claim 25.

(Geppert. Page 48, bottom right, “One of the most successful Web sites for design information is maintained by National Semiconductor Corp., Santa Clara, Calif. Visitors to the company's site have access to its complete portfolio of more than 27 000 parts-the equivalent of more than 40 000 pages of technical information.”)

Regarding Claim 42:

The reference discloses A program for allowing a computer to function as the printed circuit board design instruction support device according to claim 25. **(Geppert. Page 47, left bottom, client/server)**

Regarding Claim 44:

The reference discloses A printed circuit board design instruction support method in which printed circuit board design is supported between a circuit design and a printed circuit board design, said method comprising the step of: displaying design instruction information regarding previously fixed printed circuit board design based on a circuit diagram designed by a circuit design. **(Geppert. Page 46, Figure 1, circuit CAD)**

Regarding Claim 45:

The reference discloses A program for allowing a computer to execute the printed circuit board design instruction support method according to claim 44. **(Geppert. Page 47, left bottom, client/server)**

Regarding Claim 46:

The reference discloses A computer-readable recording medium recording the program according to claim 42. **(Geppert. Page 47, left bottom, client/server)**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claim(s) 33-35 and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Geppert**.

Regarding Claim 33:

Geppert does not explicitly recite the term “highlighting” with respect to the claims recitation of The printed circuit board design instruction support device according to claim 32, said device comprising: means for selecting items or keywords displayed by said display means; and means for highlighting items on a printed circuit board diagram designed by a printed circuit board design, which correspond to items selected by said selection means, when items are selected by said selection means, and highlighting items associated with keywords on said printed circuit board diagram, which correspond to keywords selected by said selection means, when keywords are selected by said selection means.

However it would have been obvious to one of ordinary skill in the art at the time of the invention to highlight items that were of importance to design/verification/etc. This is seen in Geppert on Page 49, left middle, which recites “It is a cross-platform software suite for collaborative design on the Web, so that teams

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with members anywhere in the world may manage the design and configuration data associated with complex application-specific IC and custom chips.

Regarding Claim 34:

Geppert does not explicitly recite the term “highlighting” with respect to the claims recitation of The The printed circuit board design instruction support device according to claim 32, said device comprising: means for selecting items or keywords displayed by said display means; and means for highlighting items on said circuit diagram, which correspond to items selected by said selection means, when items are selected by said selection means, and highlighting items associated with keywords on said circuit diagram, which correspond to keywords selected by said selection means, when keywords are selected by said selection means.

However it would have been obvious to one of ordinary skill in the art at the time of the invention to highlight items that were of importance to design/verification/etc. This is seen in Geppert on Page 49, left middle, which recites “It is a cross-platform software suite for collaborative design on the Web, so that teams with members anywhere in the world may manage the design and configuration data associated with complex application-specific IC and custom chips.”

Regarding Claim 35:

Geppert does not explicitly recite the term “highlighting” with respect to the claims recitation of The printed circuit board design instruction support device according to any one of claims 33 and 34, said device comprising: means for executing macro that supports check in printed circuit board design before items are highlighted, after items are highlighted, or before and after items are highlighted by said highlight means.

However it would have been obvious to one of ordinary skill in the art at the time of the invention to highlight items that were of importance to design/verification/etc. This is seen in Geppert on Page 49, left middle, which recites “It is a cross-platform software suite for collaborative design on the Web, so that teams with members anywhere in the world may manage the design and configuration data associated with complex application-specific IC and custom chips.” See also Figure 1 of Geppert with respect to verification.

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Regarding Claim 43:

The reference discloses A program for allowing a computer to function as the printed circuit board design instruction support device according to claim 35. (**Geppert. Page 47, left bottom, client/server**)

8. **Claim(s) 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Geppert in view of Kundert, "Power Supply Noise Reduction", hereafter Kundert.**

Regarding Claim 28:

Geppert does not explicitly disclose The printed circuit board design instruction support device according to claim 27, wherein said extraction means extracts damping resistances being items included in said circuit diagram and target ICs of the resistances based on the part attribute of the damping resistances and the wiring connection information of the damping resistances.

However Kundert discloses damping resistances being items included in said circuit diagram and target ICs of the resistances based on the part attribute of the damping resistances and the wiring connection information of the damping resistances. (**Kundert. Figure 8**)

Geppert and Kundert are analogous art in circuit design.

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow for the design of a damping resistance in the IC and its corresponding wiring information as per **Kundert** with the web based design of IC's in **Geppert** since damping resistors are a well known and common way to reduce ringing and noise peaking in integrated circuit designs. (**Kundert, Section 6**)

Regarding Claim 29:

Geppert does not explicitly disclose The printed circuit board design instruction support device according to claim 27, wherein said extraction means extracts bypass capacitors being items included in said circuit diagram and target ICs of the capacitors based on the wiring connection information of the bypass capacitors.

However Kundert discloses bypass capacitors being items included in said circuit diagram and target ICs of the capacitors based on the wiring connection information of the bypass capacitors.

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Geppert and Kundert are analogous art in circuit design.

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow for the design of a bypass capacitor in the IC and its corresponding wiring information as per **Kundert** with the web based design of IC's in **Geppert** since bypass capacitors are a well known and common way to reduce output impedance in integrated circuit designs. (See **Kundert, Page 5, last paragraph**)

Regarding Claim 30:

Geppert does not explicitly disclose The printed circuit board design instruction support device according to claim 27, wherein said extraction means extracts bypass capacitors being items included in said circuit diagram and target ICs of the capacitors based on the arrangement positional information of the bypass capacitors and the wiring connection information of the bypass capacitors.

However Kundert discloses bypass capacitors being items included in said circuit diagram and target ICs of the capacitors based on the arrangement positional information of the bypass capacitors and the wiring connection information of the bypass capacitors.

Geppert and Kundert are analogous art in circuit design.

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow for the design of a bypass capacitor in the IC and its corresponding wiring information as per **Kundert** with the web based design of IC's in **Geppert** since bypass capacitors are a well known and common way to reduce output impedance in integrated circuit designs. (See **Kundert, Page 5, last paragraph**)

Regarding Claim 31:

Geppert does not explicitly disclose The printed circuit board design instruction support device according to claim 29, wherein said extraction means extracts bypass capacitors being items included in said circuit diagram, target ICs of the capacitors, and the information of wiring connecting the both parts.

However Kundert discloses bypass capacitors being items included in said circuit diagram, target ICs of the capacitors, and the information of wiring connecting the both parts.

Geppert and Kundert are analogous art in circuit design.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to allow for the design of a bypass capacitor in the IC and its corresponding wiring information as per **Kundert** with the web based design of IC's in **Geppert** since bypass capacitors are a well known and common way to reduce output impedance in integrated circuit designs. (See **Kundert, Page 5, last paragraph**)

Examiners Remarks

9. i) Examiner has cited particular columns and line numbers in the references applied to the claims for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

ii) The Examiner respectfully requests, in the event the Applicants choose to amend or add new claims, that such claims and their limitations be directly mapped to the specification, which provides support for the subject matter. This will assist in expediting compact prosecution.

iii) Further, the Examiner respectfully encourages Applicants to direct the specificity of their response with regards to this office action to the broadest reasonable interpretation of the claims as presented. This will avoid issues that would delay prosecution such as limitations not explicitly presented in the claims, intended use statements that carry no patentable weight, mere allegations of patentability, and novelty that is not clearly expressed.

iv) The Examiner also respectfully requests Applicants, in the event they choose to amend, to supply a clean version of the presented claims in addition to the marked-up copy in order to avoid potential inaccuracies with the version of the claims that would be examined.

Conclusion

10. All Claims are rejected.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saif A. Alhija whose telephone number is (571) 272-8635. The examiner can normally be reached on M-F, 11:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. *Informal or draft communication, please label PROPOSED or DRAFT*, can be additionally sent to the Examiners fax phone number, (571) 273-8635.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

SAA

June 5, 2008